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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,168	10/23/2003	Nathan Raymond Hughes	AUS920030630US1	1935

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EXAMINER

PAUL, DISLER

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/692,168	Applicant(s) HUGHES ET AL.	
	Examiner Disler Paul	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/23/03</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 21 is rejected under 35 U.S.C. 101 because

Claims 21 is pertained solely to a data structure without recitation of any step(s) to be performed on a computer or any process activity that ties to physical acts or data manipulation representing physical object or activities to achieve a practical application.

"Data structures **not claimed** as embodied in computer-readable media are descriptive material per se and **are not statutory** because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (Claim to a data structure per se held nonstatutory.). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to b realized, and is thus statutory." See Interim Guidelines on 35 USC 101, Annex IV (a): Functional Descriptive Material.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2,4,11,12-14,21 are rejected under 35 U.S.C. 102(e) as being anticipated by Boyd ("US 6,968,063 B2").

Re claim 1, Boyd disclose a method for intelligent audio output control, the method comprising: obtaining values for a set of input parameters ("fig.2-5(20a,20b)-detectors; col.2 line 27-30") and obtaining an audio output parameter prediction based on the values for the set of input parameters ("fig.2-5(30);col.3 line 27-30"); and adjusting an audio output parameter for an audio system using the audio output parameter prediction("fig.2-5(40);col.2 line 57-59").

Re claim 2, the method of claim 1, wherein the step of obtaining values for a set of input parameters includes receiving values from one or more sensors ("fig.2-5(20)-detectors; col.2 line 27-30").

Re claim 4, the method of claim 1, wherein the set of input parameters includes audio type ("col.2 line 27-28/ambiat noise detector").

Re claims 12-14, have been analyzed and rejected with respect to claims 2-4.

Re claim 11, Boyd disclose of the apparatus for intelligent audio output control, the apparatus comprising: means for obtaining values for a set of input parameters ("fig.1-5(20) detectors"); means for obtaining an audio output parameter prediction based on the values for the set of input parameters and means for adjusting an audio output parameter for an audio system using the audio output parameter prediction ("fig.1-5(10,40); col.2 line 16-18; col.2 line 38-40").

Re claim 21, has been analyzed and rejected with respect to claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a

Art Unit: 2615

whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3,13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd ("US 6,968,063 B2") and further in view of Cairns ("US 2002/0097884 A1").

Re claim 3, the method of claim 1, However, Boyd fail to disclose of the further limitation wherein the set of input parameters includes at least one of speed, whether a window is open or closed, interior or exterior noise levels, whether a convertible top is up or down, windshield wiper use, windshield wiper level, whether headlights are on, and global positioning system (GPS) coordinates. But, Cairns disclose a system in which he further disclose of the limitations wherein the set of input parameters includes at least one of speed, whether a window is open or closed, and global positioning system (GPS) coordinates ("page 1[004]; page 3[0019]") for the purpose of having a noise reduction algorithm which is dependent on the vehicle conditions as detected for used in a vehicle. Thus, taking the combined teaching of Boyd and Cairns as a whole, it would have been obvious for one skill in the art to modify Boyd by incorporating the limitations wherein the set of input parameters includes at least one of speed, whether a window is open or closed, and global positioning system (GPS) coordinates for the purpose of having a noise reduction

Art Unit: 2615

algorithm which is dependent on the vehicle conditions as detected for used in a vehicle.

Re claim 13, has been analyzed and rejected with respect to claim 3.

5. Claims 5-8, 10,15-18,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd ("US 6,968,063 B2") and further in view of Heckel ("US2002/0137995").

Re claim 5, the method of claim 1, wherein the step of obtaining an audio output parameter prediction includes: receiving a plurality of data and wherein each data includes a value for each of the set of input parameters and an audio output parameter value ("fig.1-5/(30); col. 3 line 27-30/ data of input parameters (detected noise): output parameter (adjustment output)"). But, Boyd fail to disclose of the data point and performing statistical analysis on the plurality of data points to determine an audio output parameter prediction. However, Heckel disclose an improved system in which he disclose of the data point and performing statistical analysis on the plurality of data points to determine an audio output parameter prediction ("page 2[0010] line 12-15;page 2[0009] line 1-6: input parameter (ratio value) to predict output parameter (threshold value)") for the purpose

Art Unit: 2615

of detecting and responding to unreliable signal conditions associated with a sensor. Thus, taking the combined teaching of Boyd and Heckel as a whole, it would have been obvious for one of the ordinary skill in the art to modify Boyd by incorporating the data point and performing statistical analysis on the plurality of data points to determine an audio output parameter prediction for the purpose of detecting and responding to unreliable signal conditions associated with a sensor.

Re claim 6, the method of claim 5, wherein the statistical analysis includes at least one of performing linear regression analysis ("Heckel; page 3 [0029] line 2-3").

Re claim 7, the method of claim 5, further comprising: storing the values for the set of input parameters and the audio output parameter prediction as a data point ("Heckel; fig.1(118); page 3 [0023]").

Re claim 8, the method of claim 1, further comprising: receiving user input of an audio output parameter value and obtaining values for the set of input parameters ("fig.1-5(20)/detector obtain sound level; col.2 line 42-44"); but Boyd fail to disclose of the further limitation of storing the values for the set of input parameters and

Art Unit: 2615

the audio output parameter value as a data point. However, Heckel disclose an improved system in which he disclose of the data point and storing the values for the set of input parameters and the audio output parameter value as a data point ("page 2[0010] line 12-15;page 2[0009] line 1-6: input parameter (ratio value) to predict output parameter (threshold value); ; stored as in fig.1(118); page 3[0023]") for the purpose of detecting and responding to unreliable signal conditions associated with a sensor. Thus, taking the combined teaching of Boyd and Heckel as a whole, it would have been obvious for one of the ordinary skill in the art to modify Boyd by incorporating the data point and storing the values for the set of input parameters and the audio output parameter value as a data point for the purpose of detecting and responding to unreliable signal conditions associated with a sensor.

Re claim 10, the method of claim 1, wherein the audio output parameter is one of volume level ("col.1 line 23-24; col.1 line 30"), However, Boyd fail to disclose of the equalizer settings. But, official Notice is taken that this limitation is commonly known in the art, thus it would have been obvious for one of the ordinary skill in the art to modify Boyd by incorporating the equalizer settings as output parameter for purpose of doing the adjustment.

Re claim 15, the apparatus of claim 11, wherein the means for obtaining an audio output parameter prediction includes: means for receiving a plurality of data, wherein each data includes a value for each of the set of input parameters and an audio output parameter value; and means for performing analysis on the plurality of data points to determine an audio output parameter prediction ("fig.1-5/(volume control); col. 4 line 10-16"). However, Boyd fail to disclose of the further limitation wherein the data point and performing the statistical analysis. But, Heckel disclose an improved system in which he disclose of the data point and performing statistical analysis on the plurality of data points to determine an audio output parameter prediction ("page 2[0010] line 12-15;page 2[0009] line 1-6: input parameter (ratio value) to predict output parameter (threshold value)") for the purpose of detecting and responding to unreliable signal conditions associated with a sensor. Thus, taking the combined teaching of Boyd and Heckel as a whole, it would have been obvious for one of the ordinary skill in the art to modify Boyd by incorporating the data point and performing statistical analysis on the plurality of data points to determine an audio output parameter prediction for the purpose of detecting and responding to unreliable signal conditions associated

Re claim 16, has been analyzed and rejected with respect to claim 6.

Re claim 17, the apparatus of claim 15, further comprising: means for storing the values for the set of input parameters and the audio output parameter prediction as a data point ("Heckel; memory as in fig.1/(118)").

Re claim 18, the apparatus of claim 11, further comprising: means for receiving user input of an audio output parameter value ("fig.1-5(18); col.2 14-15"); means for obtaining values for the set of input parameters ("fig.1-5(20)"). However, Boyd fail to disclose of the further means for storing the values for the set of input parameters and the audio output parameter value as a data point. However, Heckel disclose an improved system in which he disclose of the means for storing the values for the set of input parameters and the audio output parameter value as a data point ("Heckel; memory as in fig.1/(118)") for the purpose of detecting and responding to unreliable signal conditions associated with a sensor. Thus, taking the combined teaching of Boyd and Heckel as a whole, it would have been obvious for one of the ordinary skill in the art to modify Boyd by incorporating the means for storing the values for the set of input parameters and the audio output parameter value as a data point purpose of detecting and responding to unreliable signal conditions associated with a sensor.

Re claim 20, has been analyzed and rejected with respect to claim 10.

6. Claims 9,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd ("US 6,968,063 B2") and further in view of Chee et al. ("US 2003/0157504 A1").

Re claim 9, the method of claim 1, However, Boyd fail to disclose of the further limitation of wherein the step of obtaining an audio output parameter prediction includes: identifying a closest data point within a plurality of historical data points; and setting the audio output parameter prediction to an audio output parameter value of the closest data point. But, Chee et al. disclose a system for multiplexing in which when doing statistical analysis outlier he disclose of the similar technique of identifying a closest data point within a plurality of historical data points; and setting the audio output parameter prediction to an audio output parameter value of the closest data point ("page 21[0222], page 22[0227] processor") for the purpose of determining the presence of a target analyte in a sample. Thus, taking the combined teaching of Boyd and now the similar technique of Chee et al. as a whole, it would have been obvious for one or ordinary skill in the art in performing statistical analysis by

Art Unit: 2615

incorporating the technique of identifying a closest data point within a plurality of historical data points; and setting the audio output parameter prediction to an audio output parameter value of the closest data point for the purpose of determining the presence of a target analyte in a sample.

Re claim 19, has been analyzed and rejected with respect to claim 9 ("see details in claim 9 with processor").

Contact


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Disler Paul whose telephone number is 571-270-1187. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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